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RESEARCH AND DEVELOPMENT

Contract No. N00014-88-C-0571

"A Cryocooler for High Acceleration Applications"

Seventh Quarterly Report

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June 25, 1990

WORK PERFORMED THIS QUARTER

Repairs to our sputtering system have been completed and the system is operable. The replaced oscillator tube delivers significantly more power than the previous tube, which is normally advantageous due to higher sputtering rates. However, in our particular application, this increased power is resulting (we believe) in dissociation of the oxide we are trying to sputter. Optimization of the sputtering conditions to obtain the required oxide film is currently underway.

WORK PLANNED FOR NEXT QUARTER

We anticipate receiving our heat exchanger material in September. In addition, work will continue on optimizing the sputtering system.

PROBLEMS AND SOLUTIONS

Delivery of the heat exchanger material has been delayed. Our subcontractor is currently procuring the needed material and expects to have it by mid-July after which it can be processed into final form. The required material for this effort is not part of their normal inventory and has proved harder to obtain than our original discussions with them indicated. Unfortunately, their facility is scheduled for a three-week maintenance shut down this summer, which pushes our delivery date that much farther back. Because the progress of this effort depends on receipt of the heat exchanger material, we will be requesting a no-cost extension. Once the material is received at ACE, Inc. the test program proceed.